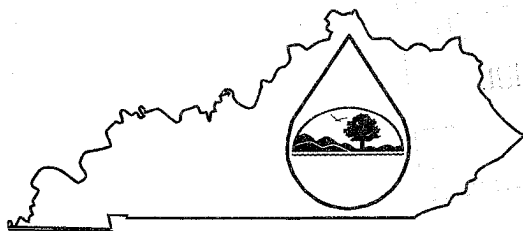


KPDES FORM HQAA



Kentucky Pollutant Discharge Elimination System (KPDES)

High Quality Water Alternative Analysis

The Antidegradation Implementation Procedures outlined in 401 KAR 5:030, Section 1(3)(b)5 allows an applicant who does not accept the effluent limitations required by subparagraphs 2 and 3 of 5:030, Section 1(2)(b) to demonstrate to the satisfaction of the Environmental and Public Protection Cabinet that no technologically or economically feasible alternatives exist and that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the water is located. The approval of a POTW's regional facility plan pursuant to 401 KAR 5:006 shall demonstrate compliance with the alternatives analysis and socioeconomic demonstration for a regional facility. This demonstration shall also include this completed form and copies of any engineering reports, economic feasibility studies, or other supporting documentation.

I. Permit Information

Facility Name:	Premier Elkhorn Coal Company	KPDES NO.:	KYG045910
Address:	P.O. Box 130	County:	Pike
City, State, Zip Code:	Pikeville, Kentucky 41502	Receiving Water Name:	Robinson Creek

II. Alternatives Analysis - For each alternative below, discuss what options were considered and state why these options were not considered feasible.

Discharge to other treatment facilities. Indicate which treatment works have been considered and provide the reasons why discharge to these works is not feasible.

A wastewater treatment facility operated by the City of Pikeville is located near Island Creek, approximately 15 miles north-West of the proposed discharge sites. In order to transfer the discharges a pipeline system would be needed. The estimated costs associated with the pipeline construction would be approximately \$2.00/linear foot for an eight inch diameter PVC pipe; approximately \$60.00/hour for labor (4 man crew @ \$15.00/hr. each); approximately \$10,000 per pumping station (discharge must travel uphill); \$500,000 for obtaining property rights; treatment facility costs of approximately \$10/day for the life of the mine (estimated life of 10 years). Thus, the total costs would be calculated as follows: + labor costs = \$60.00 X 600 hours = \$36,000 + 3 pumping station = \$30,000 + property rights = \$500,000 + treatment costs = \$10 X 3,650 days = \$36,500; for a total cost of \$760,900. This alternative would result in additional environmental impacts resulting from construction of a pipeline.

A possible alternative to piping water to the treatment facility would be the use of trucks to transport water. This alternative would pose additional costs in the construction of a system of pipes and collection tanks to collect and hold the water prior to loading tank trucks. There would also be transportation costs of approximately \$0.70 per mile. If the total amount of water collected per month were 3,904,347 gallons (based on proposed pond volumes), it would need 1952 round trips per month using a 2000-gallon truck. Thus, 1952 trips at a distance of 30 miles at \$0.70/mile generates a cost of \$40,992/per month, \$491,904 per year, \$4,919,040 total over the life of the project. This alternative would also result in additional impacts to the environment in the form of a loss to the local drainage area of more than 3.9 million gallons of water per month. This may constitute material damage to the hydrologic balance within and outside of the permit area (405 KAR 18:060, Section 1). In addition, implementing this alternative would result in increased risks to public safety because it would necessitate repeated daily trips by large water tankers on the small rural local roads.

2. Use of other discharge locations. Indicate what other discharge locations have been evaluated and the reasons why these locations are not feasible.

The applicant has evaluated the possibility of directing the proposed discharge to an adjacent stream channel in order to avoid discharges to Robinson Creek. The adjacent stream channel evaluated was Levisa Fork (a high quality water), located northeast of the proposed discharges. In order to transfer the proposed discharge to Levisa Fork, the discharge would have to be pumped and carried through a pipeline that traversed the surrounding hilly topography. The constructed pipeline would need to be approximately 6 miles in length with a minimum of 3 pumping stations in order to be re-directed to Levisa Fork. The cost associated with the transfer of the discharge to the adjacent stream channel would involve the purchase of 3 pumping stations (approximately \$30,000), (pipe cost = \$2.00 x 26,400 ft. = \$58,200), labor costs (approximately \$15.00/hr/laborer at 4 laborers for 600 hours = \$36,000), property rights acquisitions of approximately \$100,000, and equipment for clearing of the pipeline route (approximately \$68,000) for a total cost of \$292,200. Furthermore, the environmental impact to the adjacent Levisa Fork would be virtually the same as to the proposed stream channel, with additional surface disturbances necessary for the construction and site preparation.

II. Alternatives Analysis - continued

3. **Water reuse or recycle.** Provide information about opportunities for water reuse or recycle at this facility. If water reuse or recycle is not a feasible alternative at this facility, please indicate the reasons why.

The applicant is proposing ten (10) discharge locations (sedimentation ponds) that will discharge into Robinson's Creek. The proposed discharge points will control runoff from approximately 1038 surface disturbance acres via sedimentation ponds and assuming the ponds are all constructed at the same time and assuming that the ponds maintain a full volume of water, the total volume of water available for recycling uses each month would be approximately 3,904,347 gallons (based on proposed pond volumes). Approximately 20,000 gallons of the water could be reused each month as a dust suppressant for the proposed roads to be constructed. Re-distribution of the water to the surrounding surface areas would be difficult, as the surrounding slopes are steep and runoff would create additional potential environmental damage. An additional on-site reuse of waters to be discharged evaluated is that of utilizing the water during reclamation operations. While some water may be utilized within hydroseeders during reclamation, the total amount (approximately 2,000 - 3,000 gallons) utilized would not significantly reduce the water generated each month. The amount of water that could be reused/recycled on site would be, during months of maximum usage, approximately 22,000 to 23,000 gallons per month. This would leave an excess of more than 3.8 million gallons per month.

In order to recycle the additional amounts of generated wastewater to potable drinking water, the discharge would have to be transferred to the City of Pikeville drinking water treatment facility located near Island Creek, approximately 15 miles North-West of the proposed discharge location. Thus, the cost associated with the transfer of the discharges to the treatment facility would be as follows: \$2.00/linear foot for an eight inch diameter PVC pipe; approximately \$60.00/hour for labor (4 man crew @ \$15.00/hr. each); approximately \$10,000 per pumping station (discharge must travel uphill); \$500,000 for obtaining property rights; treatment facility costs of approximately \$10/day for the life of the mine (estimated life of 10 years). Thus, the total costs would be calculated as follows: pipe cost = $\$2.00 \times 79,200 \text{ ft.} = \$158,400$ + labor costs = $\$60.00 \times 600 \text{ hours} = \$36,000$ + 3 pumping station = $\$30,000$ + property rights = $\$500,000$ + treatment costs = $\$10 \times 3,650 \text{ days} = \$36,500$; for a total cost of \$787,300.

4. **Alternative process or treatment options.** Indicate what process or treatment options have been evaluated and provide the reasons they were not considered feasible.

The applicant is proposing a coal removal operation and will remove the coal reserves by surface mining methods. An alternative to this removal method would be that of underground mining. Coal removal by underground mining methods of the proposed reserves is impractical, as the coal beds within the reserve area can not be economically mined via the underground mining method due to the nature of the reserves. The geology within the reserve area will not support multiple seam underground mining operations as the seams are too close in elevation to one another. Additionally, a multiple seam underground mining operation would create worker safety hazards due to geologic features such as poor roof conditions.

An on-site wastewater treatment facility would be a difficult task. The cost of the treatment facility alone (\$50,000 - \$100,000) would make this alternative difficult. Other costs associated with a treatment facility would include employee salaries of \$40,000/year/employee, chemical costs of \$50,000/ year or more, miscellaneous equipment purchase costs of \$50,000 per year, maintenance costs of \$10,000/year. Upon completion of mining operations the removal of the wastewater treatment facility would cost \$5,000 - \$8,000. A waste water treatment facility designed to treat mine run-off would primarily use a series of water holding tanks and chemicals such as flocculents to reduce sediment and dissolved mineral loads in the water. As such, it would be performing the same treatment methods as with the use of ponds, but at a higher cost.

II. Alternatives Analysis - continued

On-site or subsurface disposal options. Discuss the potential for on-site or subsurface disposal. If these options are not feasible, then please indicate the reasons why.

The potential for on-site disposal of wastewater was investigated. The construction of injection wells on-site was investigated as an alternative to the proposed discharges. The injection wells would be approximately 8" in diameter and approximately 300' in depth and would hold a volume of water of approximately 785 gallons per well. Thus, approximately 4974 wells would be needed to ensure no discharge will occur. The estimated costs associated with the wells would be approximately \$20/linear foot, thus, 4974 wells at 300' in depth would cost approximately \$29,844,000.

Additionally, the construction of a subsurface septic tank and leachate bed was evaluated. The cost of the septic tank and leachate bed system would be approximately \$5,000 for each system (10 needed = \$50,000). In addition to the cost being economically challenging, the topography (no available flat areas) associated with the proposed discharge areas would eliminate the construction of on-site septic systems. Furthermore, additional surface disturbances would be necessary during maintenance and removal of the septic system(s). Septic systems would not adequately treat sedimentation, as they are designed as biological treatment facilities.

Evaluation of any other alternatives to lowering water quality. Describe any other alternatives that were evaluated and provide the reasons why these alternatives were not feasible.

Another alternative investigated for the proposed discharges involves avoiding the proposed mining operation. To avoid the proposed mining operation would result in the coal reserves remaining in-place and would not accomplish project goals.

With the coal reserves remaining in-place and the proposed surface mining operation not being conducted, approximately 20 directly related jobs would be lost. The loss of the jobs would result in a reduction of the local tax base should the potential laborers be forced to travel outside the area for employment. Miners in Kentucky made an average weekly salary of \$972.00 in 2004 (KY Coal Facts). Thus, this would mean a loss of approximately \$1,010,880 (20 employees with annual salaries of \$50,544) annually in local taxable income. Additionally, without the in-place coal being mined, the total loss in coal severance tax would be approximately \$1,683,542 (based on a minimum of \$0.50/ton with approximately 3,367,083 tons of recoverable reserve).

Additionally, the applicant may elect to accept more stringent limitations for the discharges in order to waive the HQAA requirements. The more stringent limitations would potentially create a long-term retention of the discharge points. The costs associated with on-going treatment of the discharge points would vary based upon the flow of the discharge in combination with the concentration of the contaminant. Based upon present treatment facilities be approximately \$200/month for each structure, thus resulting in an annual discharge maintenance cost of approximately \$24,000 (\$200 x 10 x 12). Consideration was also given to the temporary nature of the discharge points. Once the post-mining reclamation has matured, the discharge will be eliminated and natural hydrologic function will be restored.

A limestone facility was evaluated for treatment of discharged water not within acceptable ranges. In order to construct a limestone facility, additional disturbances would be necessary downstream from the proposed discharge point(s). Thus, creating additional sedimentation loads to the local stream channels. Furthermore, the limestone facility may not accurately treat the discharged contaminate.

III. Socioeconomic Demonstration

1. State the positive and beneficial effects of this facility on the existing environment or a public health problem.
The proposed surface mining operation will be performed in accordance with all state and federal regulations governing the coal mining industry to ensure environmental and public health.

The site for which the proposed mining operation will be located is a former pre-law surface mining operation that still contains 55,335 linear feet of existing highwalls associated with coal removal and consists of approximately 146 acres. The existing highwalls pose a possible environmental hazard associated with the exposed strata. Additionally, the existing highwalls pose public safety issues with the potential for rock falls. The proposed project will eliminate the existing highwalls to the fullest extent possible. The elimination of the existing highwalls will have a positive impact on the existing environment and to public safety. Additionally, the proposed operation will control sediment runoff created by logging activities within the project area. The logging activities cover approximately 400 acres within the project area. Without the proposed sediment control basins, continued sedimentation to local stream channels would occur due to the logging activities.

2. Describe this facility's effect on the employment of the area.

The cumulative economic impact of the proposed project will be to contribute to the overall present economy in Pike County. Not only will the proposed project directly contribute to the mining industry, but will contribute to other sectors as well. These sectors will include trucking companies, mine supply companies, equipment sales companies, fuel sales companies, engineering firms, and other sectors that depend upon the mining industry as a part of their economic base. Pike County and surrounding counties heavily rely on the coal industry as a viable part of the local economy, with mining accounting for 17.7% of all employment in Pike County for FY 2004 and accounting for 28.3% of total county wages (KY Coal Facts). As old mining operations close, new operations must be opened in order for the local economy to sustain its current level. History has shown that a 'slow down' in the coal industry directly impacts local business.

While mining, retail, and services employed the greatest percentages of workers in Letcher County in 2004, the mining, public administration, and information sectors provided the highest average weekly wage (U.S. Department of Labor, Bureau of Labor Statistics). The mining industry paid an average weekly wage of \$972.00. It is estimated that the proposed surface mining operation will pay out an annual payroll of approximately \$1,010,880 to approximately 20 employees. Additionally, the proposed mining project would support employment for sectors that provide a service to the mining industry, i.e. material sells equipment sells/rentals, etc. The money paid out would be circulated throughout the community and help create a healthful local economy. The total number of jobs created both directly and indirectly by the domestic mining industry for Pike County was more than 3 times the number of workers directly involved in mining (KY Coal Facts). In this instance, approximately 60 people would be indirectly benefited by the proposed surface mining operation.

- Describe how this facility will increase or avoid the decrease of area employment.

The proposed mining operation will be a new facility that will possibly create employment for persons currently unemployed or for persons currently working at other mining facilities that are nearing completion, and perhaps will become unemployed if new job opportunities are not presented. The jobs created by the proposed operation will be permanent during the life of the operation. Additionally, the proposed operation may possibly create jobs indirectly related to the operation as additional mining operations create demands for operational supplies. Thus, the 20 employees needed to conduct the proposed mining operation will be able to continue working within the mining industry and may employ approximately 60 additional persons indirectly.

The 2000 census results showed that Pike County had a total population of 68,736 and predicted a population by 2006 of 66,860, a decrease of 2.7%. The decrease in population may result from relocations due to unavailable employment. Twenty-three percent of Pike County residents lived below the poverty range in 2004 and the unemployment rate was 6.7%. The average annual household income for residents residing in Pike County in FY 2004 was \$27,625. The proposed mining operation will aid in raising the average annual household income and will help increase job opportunities in our area.

4. Describe the industrial or commercial benefits to the community, including the creation of jobs, the raising of additional revenues, the creation of new or additional tax bases.

The mining industry contributes to the local tax base through taxes on real and personal property, which in turn funds public services. During active stages of a mining operation, the property is assessed at a higher value when real property taxes are determined. Prior to mining activities or post mining activities, the idle property has a much lower value and property taxes paid do not contribute as much to the local economy. Personal property taxes are levied on the equipment utilized during a mining operation. A surface mining operation requires the purchase and use of numerous, very expensive, pieces of equipment during the life of the operation. The purchase of mining equipment drives the industry's sizable contribution to the personal property tax base because new equipment is expensive and depreciates rapidly. Property tax payments will be received from the Coal Company during the life of the project, otherwise if not permitted, property tax payments received by the County would be a lesser amount. The state severance tax is a gross receipt tax levied on businesses that sever, extract, and/or produce natural resource products, including coal, in Kentucky. The goal of the severance tax is to provide producing counties with funds to develop alternative industries to sustain the communities in the future once this natural resource is exhausted. The proposed operation would generate approximately \$4,396,894 (based on a minimum of \$0.50/ton with approximately 8,793,669 tons of recoverable reserve) in severance tax during the life span of the operation. Although a majority of the tax revenue is directed to the state, a large portion will directly benefit the County. For example, during FY 2005 coal taxes were returned back to Pike County totaling \$2,250,524 (KY Coal Facts).

5. Describe any other economic or social benefits to the community.

By construction of the proposed haulroads, the proposed mining operation would create access to an area not previously accessible by vehicle traffic. This will aid in fire control and better access for post-mine land use and allowing the area to be more easily developed. This access would further increase the value of the property once mining activities are complete. The length of the permanent roads will be approximately 6,094 linear feet with an average width of 100 feet. All necessary drainage features, diversions and culverts, will remain in-place upon completion of mining activities. Upon final bond release, maintenance and general upkeep of the permanent roads will be the responsibility of the surface owner.

III. Socioeconomic Demonstration - continued

14. Does this project eliminate any other sources of discharge or pollutants?
(If so describe how.)

Yes



No



See Attachment 14

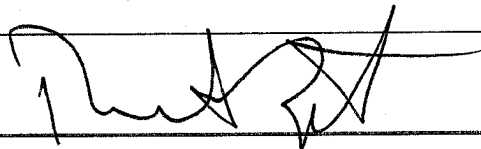
15. How will the increase in production levels positively affect the socioeconomic condition of the area?

See Attachment 15

16. How will the increase in operational efficiency positively affect the socioeconomic condition of the area?

See Attachment 16

IV Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title:	Robert Zik, Vice-President	Telephone No.:	(606) 639-0933
Signature:		Date:	6/17/08

ATTACHMENT 14:

The site for which the proposed mining operation will be located is a former pre-law surface mining operation that still contains 55,335 linear feet of existing highwalls associated with coal removal and consists of approximately 146 acres. The existing highwalls pose a possible environmental hazard associated with the exposed strata. Additionally, the existing highwalls pose public safety issues with the potential for rock falls. The proposed project will eliminate the existing highwalls to the fullest extent possible. The elimination of the existing highwalls will have a positive impact on the existing environment and to public safety. Additionally, the proposed operation will control sediment runoff created by logging activities within the project area. The logging activities cover approximately 400 acres within the project area. Without the proposed sediment control basins, continued sedimentation to local stream channels would occur due to the logging activities.

ATTACHMENT 15:

The cumulative economic impact of the proposed project will be to contribute to the overall present economy in Pike County. Not only will the proposed project directly contribute to the mining industry, but will contribute to other sectors closely related to the mining industry. These sectors will include trucking companies, mine supply companies, equipment sales companies, fuel sales companies, engineering firms, and other sectors that depend upon the mining industry as a part of their accounts receivable base. The region heavily relies on the coal industry as a part of its viable economy, as the coal industry accounts for 17.7% of all employment within Pike County and accounts for 28.3% of total county wages (KY Coal Facts, FY 2004). As old mining operations close, new operations must be opened in order for the local economy to sustain its current level.

The proposed mining operation will aid in maintaining the current level, or increase the current level, of employment within the mining sector while creating additional monies received from coal severance taxes collected during the life span of the mining operation. The proposed operation would generate approximately \$1918.75 (based on a minimum of \$0.50/ton with approximately 38,375 tons of recoverable reserve) in severance tax during the life span of the operation. Although a majority of the tax revenue is directed to the state, a large portion will directly benefit Pike County.

ATTACHMENT 16:

The welfare of persons within the Appalachian region of Kentucky has historically been dependent upon the success of the coal mining industry, especially during periods of economic uncertainty or instability. Particularly within eastern Kentucky, the importance of the coal industry looms large in most facets of the lives of the region's citizens. Given the dependence upon the coal industry, small changes in demand for coal production can often bring about drastic changes in the local economy.

The heavy dependence on the coal industry in Kentucky coal producing counties often leaves these counties susceptible to changes in the fortunes of the industry. As a result, losses in coal mining earnings in these counties often lead to increased poverty and dependence on social welfare programs.

The proposed mining plan (coal removal by underground mining methods) represents the most efficient method for the removal of the present unmined coal reserves. More efficient mining methods will equal more coal production which in-turn will generate more revenues that will aid in the overall economy of the county.